

Breast Biopsy as a Proximal Diagnostic Tool for Autism; Implication of Reduced Cancer Risk for Those on Spectrum as Well as Clarity Concerning Causative Mechanism of Cancers Associated with Increased Adipose Concentrations Relative to Collagen

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Introduction

If impaired lipid metabolism associated with autism's metabolic-neuronic dysfunction is present in other forms throughout the body, there may be new insights to be gleaned from the study of the way in which this dysfunction impacts tissue systems outside of the brain. While performing brain biopsies for the mere purpose of testing for a condition would be unjustifiable, it may be possible to biopsy other parts of the body; chiefly breast tissue; to indirectly test for the very defect in lipid metabolism that underpins neuronal-mitochondrial disorders such as autism.

Abstract

This may be the case due to the fact that when lipid metabolism is impaired, lipid levels in cells increase abnormally, having the indirect consequence of decreasing the efficiency of lipid transport overall. Impaired lipid transport reduces the concentration of fatty tissue in breast tissue, having the effect of both reducing future breast cancer risk and improving overall oxygenation of collagenous tissue.

The abnormally increased oxygenation of collagenous tissue brought on by this inefficient lipid transport leads to decreased sugar levels, which in turn increases the concentration of water in and around collagenous tissue. This, in turn, causes the collagenous tissue to become hydrolyzed, meaning that its fluid content is permanently maximized, thus making breast volume maximal relative to the amount of collagen present.

This opens up the possibility of utilizing breast biopsy as a proximal diagnostic tool for the diagnosis of autism. It is highly likely that patients found to have collagenous tissue which is maximally hydrolyzed will also be found to have an Autism Spectrum Disorder of the genetically heritable variety. Males have minute quantities of breast tissue as well, so they would not be exempt from the benefit of this sort of testing.

If substantiated, this would mean that the presence of autism, a seemingly unrelated condition, may imply a somewhat reduced breast cancer risk, while also suggesting that the already-documented increase in breast cancer risk associated with a larger proportion of the organ consisting of fatty tissue is likely due to an inflammatory chain reaction that begins with mild hypoxia with that hypoxia being triggered in the first place by an over-abundance of white fat that crowds out small pockets of collagen, depriving them of oxygen. Over time, chronic tissue-specific hypoxia leads to the breakdown of existing collagen, further increasing the proportion of tissue composed of fat and

causing substantial inflammation. Independent of BRCA1/2-associated risk, local levels of Hypoxia Immune Factor (HIF,) the extent to which collagen breaks down between mammograms, and the presence of "collagen isthmi" surrounded by fat on two or more sides as well as "collagen islands" should be factored into decisions concerning whether prophylactic mastectomy would be indicated.

Eventually, a chemical treatment capable of safely converting "white fat" into "brown fat" on a localized basis should come to replace mastectomy, preventing a great deal of emotional difficulty and obviating any need for expensive reconstructive surgeries typically done in the aftermath of that particular procedure, at least in those cases where cancer has yet to germinate. This approach would be effective for reason that brown fat tends to consume more sugar than oxygen where white fat consumes more oxygen than sugar. In the future, most breast cancers may well be prevented long in advance by the conversion of white fat into brown in the localized area using simple injections. This prophylactic treatment would have the ancillary benefit of hydrolyzing collagenous tissue and enhancing breast size.

Conclusion

Although research is still being done into compounds capable of dissolving fat entirely, the basic fact that cellular and nuclear membranes are universally constructed of lipids makes that approach akin to using a universal poison to exterminate a pest. While there is likely not a chemical that could safely be introduced to the body that simply "dissolves" fat, it is certainly possible to achieve a safe conversion of white fat into brown as that entails only a metabolic reprogramming of a cell, a process already demonstrated to be effective in vitro.